



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

There Application of:

Summers et al.

: Group Art Unit: 1653

Serial No. 09/977,137

: Examiner: Not yet assigned

Filed: October 12, 2001

: Confirmation: 2408

For: METAL BINDING PROTEINS, RECOMBINANT
HOST CELLS AND METHODS

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PRELIMINARY AMENDMENT

Commissioner for Patents
Washington, D.C. 20231

Sir:

Please enter the following amendments:

In the Specification:

Replace the paragraph bridging pages 3 and 4 with the following:

A' The present invention further provides chelon proteins which bind heavy metal ions, including but not limited to divalent cadmium and mercury ions, as well as cobalt, copper, lead, nickel and zinc cations, with relatively high affinity. The amino acid sequence of a mercury-specific chelon is disclosed in Table 1D, and the nucleotide sequence encoding it is present in Table 1C. Additional chelons which bind both mercury and cadmium ions with high affinity are disclosed in Table 2. The chelon proteins can be within cells or on the surfaces of the cells in which they were produced, for example, for use in methods of concentrating heavy metal ions from a contaminated aqueous environment, or waste stream, or the chelon proteins can be